

Hand-held Keyboard

Gary Friedman, an engineer at Jet Propulsion Laboratory, saw a need for a way of keying a computer while on the move, for example, taking notes while walking or driving. So he invented a single-handed data entry device dubbed the Data Egg (**right**) that can be used by an astronaut in space, a journalist at a press conference, by a bedridden person, or by anyone for "idea capturing" while on the go. The device was developed under NASA contract and it is being marketed by InHand Development Group, Sacramento, California.

The Data Egg is a chord key-based unit that can be used autonomously or tethered to a personal computer as an auxiliary keyboard for those who cannot work at a desk, such as bedridden people. The device resembles a beeper and is worn on a belt when not in use.

Data is entered by pressing combinations of seven buttons positioned where the fingers naturally fall when clasping the Data Egg. Invented in England for pocket electronic devices, the seven-button alphabet can be learned in as little as an hour, according to Friedman. An experienced user can enter text at a rate of 30 to 35 words a minute. The advantage over a tape recorder is that Data Egg text requires no transcription; the input can be downloaded into a computer and printed.

Friedman sees special utility for the Data Egg in extending computer access to bedridden persons and he has developed a prototype Bedridden Workstation. The



workstation is formed by tethering the Data Egg to a personal computer and incorporating an innovative display called the Private Eye. In lieu of a CRT screen, the Private Eye places in front of the user's eyes a small box that projects an image of the personal computer's screen five feet in front of the user. The user, lying down, types in text with the Data Egg hand at his side; a program in the personal computer translates the function codes generated by the Data Egg and activates the appropriate characters on the computer's keyboard.